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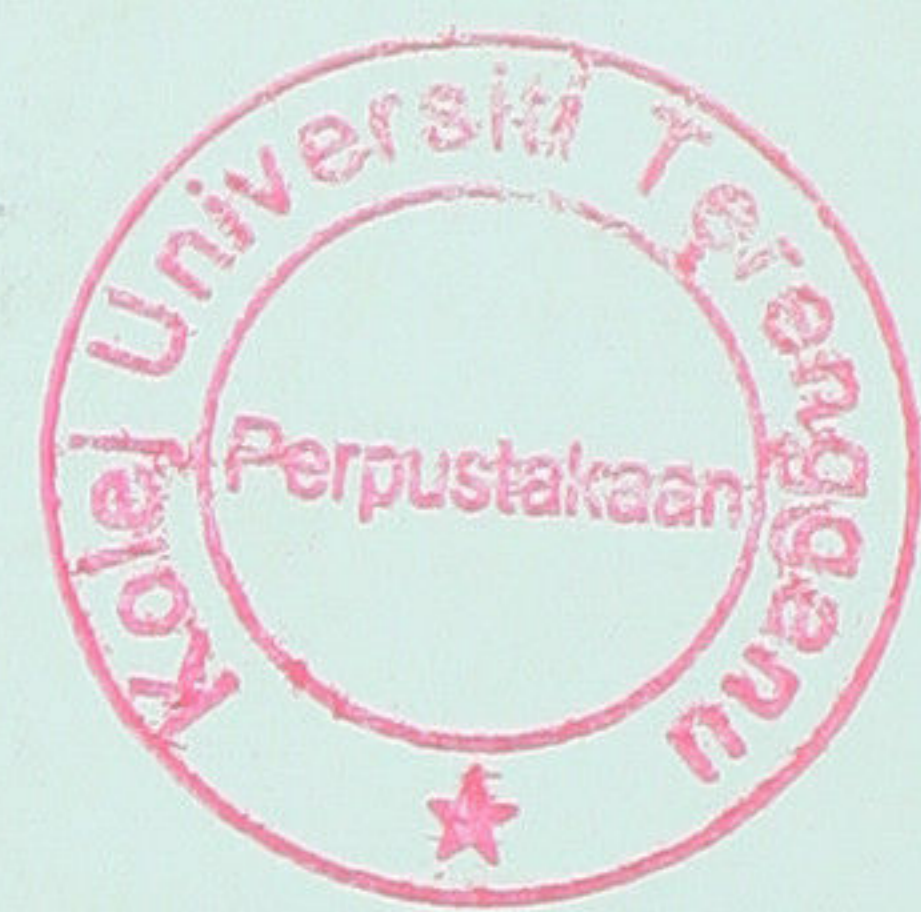
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Mapping of mangrove forest in Rompin, Pahang using remote sensing technique / Mohd Ghazali Abdul Aziz.



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**MAPPING OF MANGROVE FOREST
IN ROMPIN, PAHANG USING
REMOTE SENSING TECHNIQUE**

MOHD GHAZALI BIN ABDUL AZIZ

PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHARA

**FAKULTI SAINS DAN TEKNOLOGI
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(KUSTEM)
UNIVERSITI PUTRA MALAYSIA TERENGGANU (UPMT)
2002**

1100024364

For my beloved family; mum, dad, kak fida, aishah, pidau, hafiz and syahida...

Thanks for everything, may god bless you all!

**MAPPING OF MANGROVE FOREST
IN ROMPIN, PAHANG USING
REMOTE SENSING TECHNIQUE**

by

MOIID GHAZALI BIN ABDUL AZIZ

**A project report submitted in partial fulfillment of the requirements for
The degree of Bachelor of Science (Marine Science).**

**FACULTY OF SCIENCE AND TECHNOLOGY
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA
(KUSTEM)**

UNIVERSITI PUTRA MALAYSIA TERENGGANU (UPMT)

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TABLES OF CONTENT

	Page
ACKNOWLEDGEMENT	iv
ABSTRACT	vi
ABSTRAK	vii
TABLE OF CONTENTS	ix
LIST OF TABLES	XII
LIST OF FIGURES	XIII
LIST OF APPENDIXES	XIV
1.0 INTRODUCTION	
1.1 Introduction	1
1.2 Justification of Study	6
1.3 Objectives	7
2.0 LITERATURE REVIEW	
2.1 Definition of Mangrove	8
2.2 World Wide Distribution	8
2.3 Zonation	12
2.5 Remote Sensing	14
2.6 Landsat TM	16

2.7	Digital Image Processing	21
3.0	METHODOLOGY	
3.1	Description of Study Area	23
3.1.1	Location	23
3.1.2	Topography	23
3.2	Type of Data	26
3.3	Remote Sensing Methodology	27
3.3.1	Geometric Correction	28
3.3.2	Image Enhancement	28
3.3.3	Masking	29
3.3.4	Image Classification	29
3.3.5	Ground Truth	30
3.3.6	Accuracy Assessment	31
3.3.7	Final Map	31
3.4	Materials	31
4.0	RESULTS	
4.1	Classification	
4.1.1	Image Classification (Unsupervised)	32
4.1.2	Image Classification (Supervised)	33
4.2	Ground Truth	39
4.3	Accuracy Assessment	40

5.0	DISCUSSION	
5.1	Classification (Unsupervised)	47
5.2	Supervised Classification and Ground Truthing	48
5.3	Vegetation of Study Area	52
6.0	CONCLUSION AND RECOMMENDATIONS	58
7.0	REFERENCE	60
8.0	APPENDIX	63

PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

LIST OF TABLE

Table 1.1	6
Table 2.1	17
Table 2.2	18
Table 4.1	33
Table 4.2	34
Table 4.3	34
Table 4.4	38

PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

LIST OF FIGURES

Figure 2.1	19
Figure 2.2	19
Figure 2.3	20
Figure 2.4	20
Figure 3.1	24
Figure 3.2	26
Figure 4.1	41
Figure 4.2	42
Figure 4.3	43
Figure 4.4	44
Figure 4.5	45
Figure 4.6	46

PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

LIST OF APPENDIXES

Appendix 1	63
Appendix 2	72
Appendix 3	77
Appendix 4	86

PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

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PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

ABSTRACT

This study involves the purpose of remote sensing in mapping of mangrove forest in Rompin, Pahang. Landsat-TM scene taken on 8/7/2000 with path 126 row 58 (9 bands) was used. This image was processed using PCI EASI/ PACE ver. 7.0 software. After image enhancement and classification, 3 to 4 class was recognized in all three rivers. After ground truth done, only 7 classes acknowledged in Sg. Rompin, 6 classes in Sg. Pontian and 7 classes in Sg. Endau. In Sg. Rompin they are Water (class 1), *Rhizophora* and *Burgueira* (class 2), Mix Mangrove (class 3), Coastal Forest (class 4), *Oncosperma tigillarum* (class 5), *Sonneratia* (class 6), *Avicennia* (class 7). In Sg. Pontian they are, *Burgueira* and *Rhizophora* (class 1), Mix Mangrove (class 2), Cloud (class 3), Water (class 4), Development Area (class 5), *Nypa* (class 6). In Sg. Endau they are, *Burguiera* and *Sonneratia* (class 1), Water (class 2), *Rhizophora-Bruguiera* (class3), Mix Mangrove (class 4), Development Area (class 5), *Nypa* (class 6) and Coastal Forest (class 7). The overall accuracy of the map varies from one river to other river. For instance, in Sg. Rompin the overall accuracy for the map is 88%, in Sg. Pontian 84% and in Sg. Endau 83%. The dominant species are *Burguiera*, *Rhizophora*, *Sonneratia* and *Nypa fruticans*, all of these species can be found in each river. By using remote sensing techniques it is easier to update and presenting data as well as up keeping and monitoring the mangrove forest area for a brighter future. It is suggested that an inventory for the whole area should be done as for no such effort made before recorded and the results of inventory is very crucial in managing mangrove forest area.

ABSTRAK

Kajian ini melibatkan penggunaan kaedah remote sensing dalam penghasilan peta bagi hutan paya bakau atau paya laut di daerah Rompin, Pahang. Imej satelit yang digunakan adalah dari satelit Landsat TM yang bertarikh 8/7/2000 dan index data bernilai 126/58 dengan 9 jalur gelombang. Imej ini diproses dengan menggunakan perisian PCI EASI/PACE v. 7.0. Imej ini dipaparkan dengan kombinasi jalur gelombang 4,5,3. Selepas proses peningkatan dan pengkelasan imej, 3 hingga 5 kelas telah ditentukan bagi ketiga-tiga sungai. Setelah kerja lapangan dibuat, 7 kelas telah dikenalpasti di Sg. Rompin, 6 kelas di Sg. Pontian dan 7 kelas di Sg. Rompin. Di Sg. Rompin kelas tersebut adalah, Air (kelas 1), *Bruguiera - Rhizophora* (kelas 2), Hutan Bakau Campur (kelas 3), Hutan Pantai (kelas 4), *Oncosperma tigillarum* (kelas 5), *Sonneratia* (kelas 6), *Avicennia* (kelas 7). Bagi Sg. Pontian, *Bruguiera - Rhizophora* (kelas 1), Hutan Bakau Campur (kelas 2), Awan (kelas 3), Air (kelas 4), Kawasan Pembangunan (kelas 5), *Nypa* (kelas 6). Untuk Sg. Endau, *Bruguiera - Sonneratia* (kelas 1), Air (kelas 2), *Rhizophora-Bruguiera* (kelas 3), Hutan Bakau campur (kelas 4), Kawasan Pembangunan (kelas 5), *Nypa* (kelas 6) dan Hutan Pantai (kelas 7). Ketepatan peta bagi Sg. Rompin ialah 88%, Sg. Pontian 84% dan Sg. Endau 83%. Spesies tumbuhan yang paling dominan ialah *Bruguiera*, *Rhizophora*, *Sonneratia* dan *Nypa fruticans* dan setiap spesies ini boleh didapati di ketiga-tiga sungai. Kaedah penderiaan jarak jauh ini didapati adalah mudah untuk mengemaskini dan mempersembahkan data kawasan bakau. Seterusnya untuk tujuan penyeliaan dan pemuliharaan kawasan tersebut. Adalah dicadangkan untuk tujuan masa depan,

inventori dijalankan bagi keseluruhan kawasan kajian kerana sebelum ini usaha sedemikian rupa belum dijalankan dan hasil maklumat dari inventori tersebut amat penting bagi tujuan pengurusan kawasan hutan paya bakau.

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